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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,187	09/08/2003	Masami Niimi	117022	8409
25944	7590	10/29/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			GONZALEZ, JULIO C	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/656,187

**Applicant(s)**

NIIMI, MASAMI

**Examiner**

Julio C. Gonzalez

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6 is/are rejected.
- 7) ☒ Claim(s) 3-5, 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                               |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/08/03</u> . | 6) <input type="checkbox"/> Other: ____.                                                |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Starter having rotation restriction member assembled with actuating arm.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

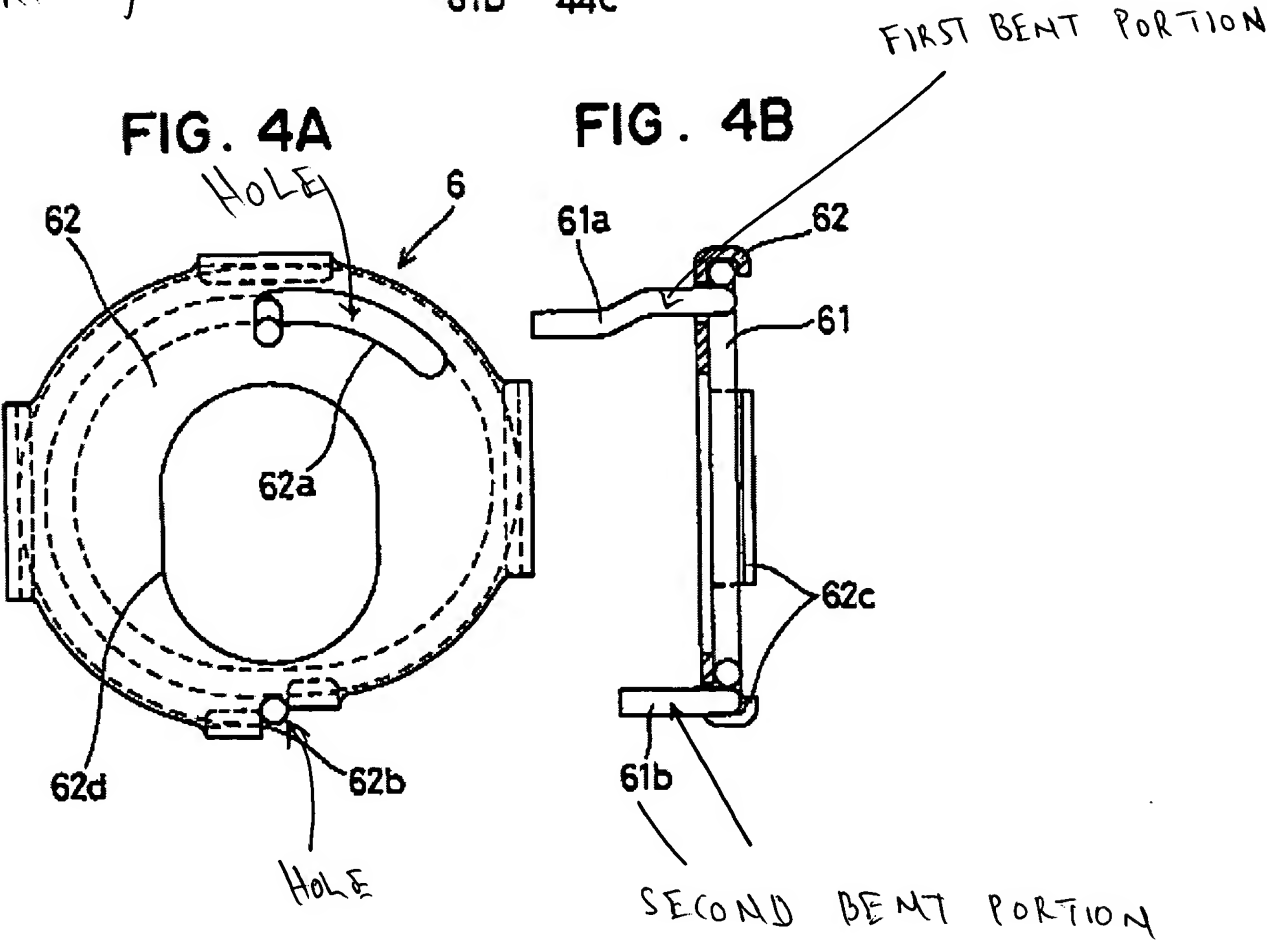
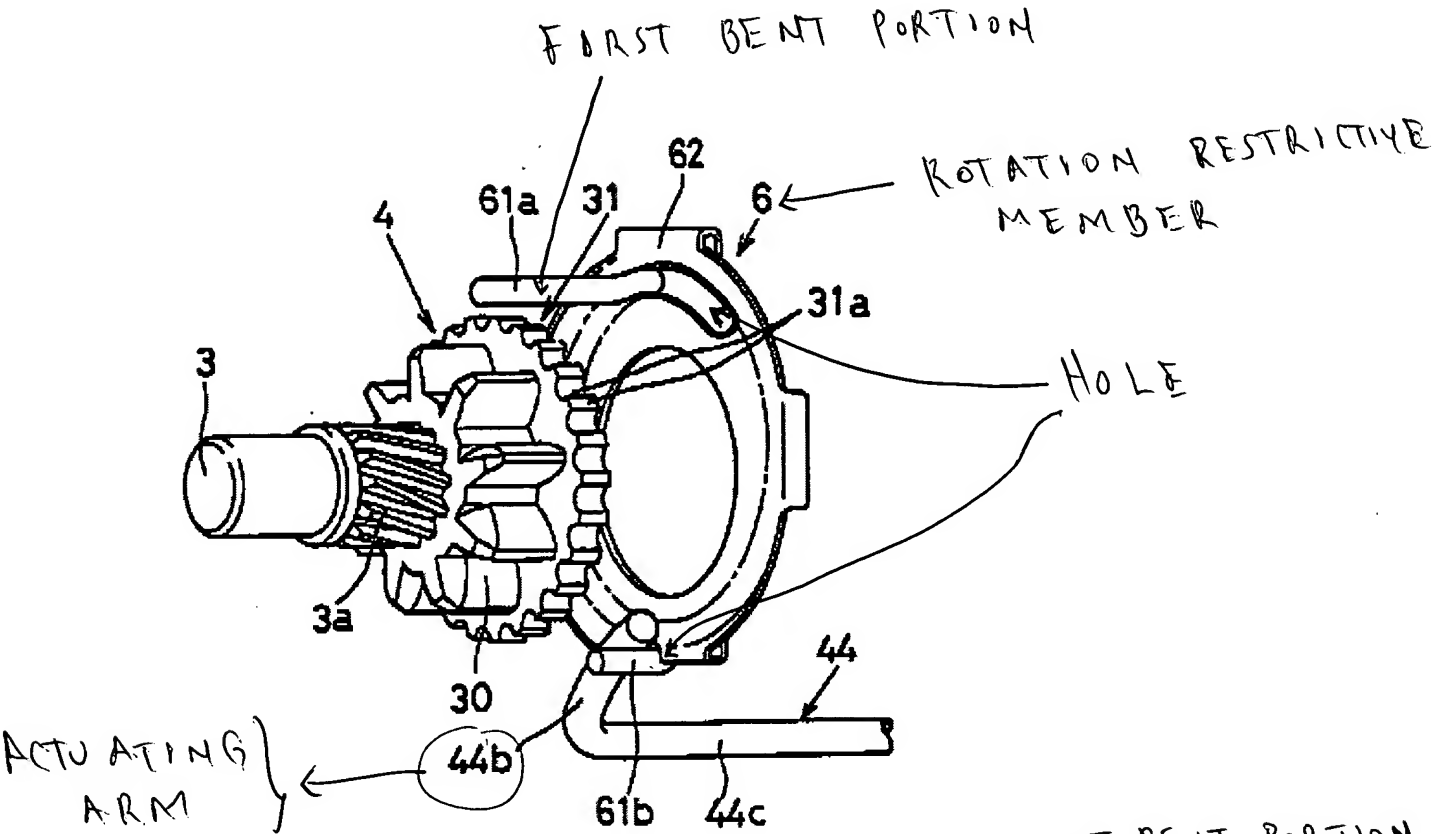
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Takagi et al (US 6,114,771).

Takagi et al discloses a starter having a motor 2, an output shaft 3, an electromagnetic switch 5, a pinion shift member 4 engaged with the output shaft 3 via helical spline coupling 3a (see figure 2 & column 4, lines 50-53) so as to shift in the axial direction on the output shaft 3 (column 7, lines 18-21), a pinion gear 30 engaging a ring gear 29 of an engine (column 4, lines 41-44) when the pinion shift member 4 shifts in a direction departing from the motor (column 7, lines 22-27).

Also, a rotation restriction member 6 has an engaging portion 61a extending in a direction crossing with a rotational direction of the pinion shift member 4 (see figures 2, 6) for restricting the rotation of the rotation restricting member 6 by engaging with an engaging portion 31a of the pinion shift member 4 and an actuating means 44 for actuating the rotation restricting member 6 by using a magnetic force generated from the electromagnetic switch 5 (see figure 7 & column 6, lines 51-65) and the actuating means 44 has a rod portion 44c rotating in response to the magnetic force of the electromagnetic switch 5 (see figure 1 & column 6, lines 18-32) and an actuating arm 44b (see figures 1 & 2) formed at distal end of the rod portion 44c so as to swing about an axis of the rod portion 44c when rod portion 44c rotates (column 6, lines 18-32) and the rotation restricting member 6 is assembled with the actuating arm 44b (see figure 2).

Moreover, the rotation restricting member 6 has a first bent portion and second bent portion which are parallel to each other (see figures 2, 4A, 4B & column 5, lines 20-22) and have coupling holes through which the rotation restricting member 6 is assembled with the actuating arm 44b and the engaging portion 61a of the rotation restriction member 6 is provided on the first bend portion (see illustration on next page).



***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al (US 6,114,771) in view of Saito et al (US 2001/0008092 A1).

Takagi et al discloses a starter having a motor 2, an output shaft 3, an electromagnetic switch 5, a pinion shift member 4 engaged with the output shaft 3 via helical spline coupling 3a (see figure 2 & column 4, lines 50-53) so as to shift in the axial direction on the output shaft 3 (column 7, lines 18-21), a pinion gear 30 engaging a ring gear 29 of an engine (column 4, lines 41-44) when the pinion shift member 4 shifts in a direction departing from the motor (column 7, lines 22-27). Also, a rotation restriction member 6 has an engaging portion 61a extending in a direction crossing with a rotational direction of the pinion shift member 4 (see figures 2, 6) for restricting the rotation of the rotation restricting member 6 by engaging with an engaging portion 31a of the pinion shift member 4 and an actuating means 44 for actuating the rotation restricting member 6 by using a magnetic force generated from the electromagnetic switch 5 (see figure 7 & column

6, lines 51-65) and the actuating means 44 has a rod portion 44c rotating in response to the magnetic force of the electromagnetic switch 5 (see figure 1 & column 6, lines 18-32) and an actuating arm 44b (see figures 1 & 2) formed at distal end of the rod portion 44c so as to swing about an axis of the rod portion 44c when rod portion 44c rotates (column 6, lines 18-32) and the rotation restricting member 6 is assembled with the actuating arm 44b (see figure 2).

Moreover, the rotation restricting member 6 has a first bent portion and second bent portion which are parallel to each other (see figures 2, 4A, 4B) and have coupling holes through which the rotation restricting member 6 is assembled with the actuating arm 44b and the engaging portion 61a of the rotation restriction member 6 is provided on the first bend portion.

However, Takagi et al does not disclose that the rotation restricting member is subjected to heat treatment.

Although the method of making of a device is not germane to the patentability of the apparatus claims, Saito et al discloses for the purpose of increasing the strength in parts of starters that heat treatment is known in the art and can be applied to parts of starters (paragraph 79, lines 3-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a starter as disclosed by Takagi et al and to modify the invention by using heat treatment for the purpose of increasing the strength in parts of starters as disclosed by Saito et al.

***Allowable Subject Matter***

6. Claims 3-5, 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 3, the prior art fails to disclose, in combination with all the base claim and any intervening claim that the rotation restricting member is shiftable in a longitudinal direction of the actuating arm and is not rotatable about an axis of the actuating arm.

With respect to claims 4 and 5, such claims are dependant on claim 3.

With respect to claim 7, the prior art fails to disclose in combination with all the base claim that the engaging portion of the rotation restricting member has at least one chamfered face for smoothly guiding the engagement between the rotation restricting member and the pinion shift member.



With respect to claim 8, the prior art fails to disclose that the actuating means has a connecting means intervening between the rod portion and the actuating arm to detachably connect the rod portion and the actuating arm.

### ***Conclusion***

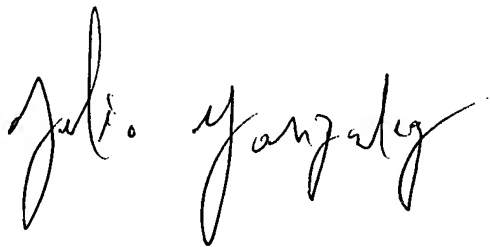
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is 571-272-2024. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jcg

October 26, 2004

A handwritten signature in cursive script, appearing to read "Julie Yangzue".